

## **Using journal writing to enhance student teachers' reflectivity during field experience placements**

**John D Bain, Griffith University**

**Roy Ballantyne, Queensland University of Technology**

**Jan Packer, Queensland University of Technology**

**Colleen Mills, Griffith University**

Paper presented at the Annual Conference of the Australian Association  
for Research in Education, Brisbane, Queensland, November 30-December 4  
1997

This study was supported by an Australian Research Council Large Grant  
(No. A79601690) for the period 1996-1998.

Using journal writing to enhance student teachers' reflectivity during  
field experience placements

Student journals are used extensively in university contexts as a means  
of facilitating reflection, deepening personal understanding and  
stimulating critical thinking (Ballantyne & Packer, 1995a). This is  
particularly so in the field of teacher education, where reflection has

come to be widely recognised as a crucial element in the professional growth of teachers (Calderhead & Gates, 1993). The need for reflective teacher education has been argued on the grounds that it facilitates the linking of theory and practice, subjects the expertise of teachers to critical evaluation, and enables them to take a more active role in their own professional accountability (Calderhead, 1988). The development of skills and habits of reflection may be seen both as a means of improving teaching practice and as an end in itself, a valid outcome of reflective teacher education (LaBoskey, 1993; McIntyre, 1993).

Given the importance attached to the development of reflective skills and propensities, it is not surprising that a range of teaching tools for this purpose has emerged in the literature. Reflective journal writing is one such technique which has been advocated by educators in many fields as a means of stimulating reflective learning (counselling-Eldridge, 1983; psychology-Hettich, 1990; nursing-Landeen, et al., 1992; management-Leary, 1981; leadership-Walker, 1985; sociology-Wagenaar, 1984; teaching-Yinger & Clark, 1981). A student journal may be defined as "a learning exercise in which students express in writing their understanding of, reflections on, response to or analysis of an event, experience or concept" (Ballantyne & Packer, 1995a). Despite the popularity and prevalence of this technique, the theoretical and empirical bases supporting its use are as yet under-developed.

Evidence provided by students' reports indicates that journals are highly rated as a means of facilitating reflection (Walker, 1985), integrating theory and practice (Holly, 1984; Ballantyne & Packer, 1995a), stimulating critical thinking and other higher levels of learning (Hettich, 1990; Wagenaar, 1984), developing personal theories about practice (Thornbury, 1991), and examining and evaluating held beliefs and concepts (Wodlinger, 1990). This evidence is encouraging, but incomplete. There is a need to corroborate students' perceptions with evidence about the nature of the reflection achieved and its learning outcomes (Hatton & Smith, 1995). This is particularly applicable to contexts in which reflective journals are used as adjuncts to conventional learning methods (Ballantyne & Packer, 1995a), because in these cases the journal is the major vehicle for reflection. However, even in contexts in which several reflective methods are used in tandem (eg., Hatton & Smith, 1995; Valli, 1992, 1993) there is consistent evidence that the level of reflective analysis and sophistication in students' journal writing varies widely, ranging from simple description in which little if any reflection is evident, to highly sophisticated self-dialogue in which several perspectives are explored (eg., Bolin, 1988; Hatton & Smith, 1995; Sparks-Langer, et al., 1990). There is thus a need to investigate ways in which reflective journal writing can be enhanced.

LaBoskey (1993) provides a useful conceptual framework for understanding the nature of reflection in preservice teacher education which can also be applied to guide research and practice in the use of

reflective tools such as journal writing. Her framework incorporates four dimensions or aspects of the act of reflection:

purpose (the impetus for reflection, which may be a perceived difficulty, an internal motivation to reflect, a need to regain control of a situation or a desire to better comprehend an issue);

context (the structural aids to reflection, such as reflective tasks, partners or observers, timing and location);

procedure (the process employed in the act of reflection, including procedures such as problem-setting, means/end analysis and generalisation as well as attitudes of openmindedness, responsibility and wholeheartedness-Dewey, 1910); and

content (the focus of reflection, which may be a practical problem, a theoretical perspective, or ideally an integration of the two).

Impacting on the act of reflection are the initial abilities and propensities of the preservice teacher, which influence both the impetus for reflection (internal vs external motivation) and the ability to engage in the necessary procedures and attitudes. The act of reflection, according to LaBoskey, results primarily in new comprehensions such as an improved ability to carry out an act of reflection, a changed belief, an attitude or value, or an altered emotional state or trait. The solving of practical problems through a

change in teaching practice is seen to be a secondary outcome of reflection.

#### Varying the content and context of journal writing

In considering the content of reflection, LaBoskey (1993, p.34) emphasises the need for preservice teachers to "embrace both practical and theoretical content". Thus, in the consideration of a practical problem, theoretical perspectives need to be applied and analysed while conversely, in evaluating an educational principle or standard, implications for practice need to be generated and explored. Others, however, have attempted to separate the practical and theoretical dimensions of reflection. Valli (1993, p.13), for example, distinguishes between deliberative reflection, in which knowledge about teaching is used to inform practice, and dialectical reflection, in which externally-driven knowledge about teaching is less important and reflection is more personally grounded as students draw upon personal knowledge to transform or reconstruct their experience (see also Bengtsson, 1995). Calderhead (1988, p.8) acknowledges that, while the relationship between theory and practice in teacher education is a continuously interactive one, "teachers' practical knowledge may be qualitatively different from systematic academic knowledge, being acquired principally for the purposes of guiding action rather than understanding events". Knowles (1993) suggests that the more personal and immediately relevant aspects of teaching provide the best starting points for reflection.

Aspects of these distinctions are evident in the three approaches to reflection described by Sparks-Langer (1992) and applied to seven teacher education programs in USA. The cognitive approach focuses on the knowledge and processes involved in teacher decision-making and encourages students to construct meaning through assimilation and accommodation of new information. The narrative approach emphasises the personal circumstances under which teachers make decisions and encourages students to draw inferences from their own experiences thus creating personal pedagogical principles. The critical approach emphasises questioning of the purposes, ends and aims of education, where students are urged to clarify their own beliefs about the purposes of education and critically examine teaching methods and materials for "hidden lessons about equity and power" (p. 150).

Sparks-Langer suggests that the narrative and critical approaches add a dimension that is lacking in the cognitive approach, viz., an expression of the values and beliefs which form the essence of teaching practice. However, although the teacher education programs reviewed by Sparks-Langer differ in these approaches, there is little evidence permitting their direct comparison. One of the aims of the present research is to compare such content differences in an intervention study.

Although there has been little systematic exploration of the effects of different journalling contexts, there is some evidence they impact significantly on the focus<sup>1</sup> and quality of reflection. Richert (1992), for example, investigated the influence of a collaborative partner and

a portfolio of teaching materials on the focus of reflection. It was found that, although students reflecting on their own used their journals to make a personal response to factors in their teaching lives, those reflecting with a partner focused on matters of general pedagogy, whereas those using a portfolio of teaching materials to aid their reflection focused on the materials themselves and the teaching issues they represented.

The literature suggests that the opportunity to share reflections with a partner, group or supervisor maybe an important factor in supporting a high level of reflection in journal writing, although little concrete evidence is available. Hatton and Smith (1995) found that a higher proportion of dialogic (as opposed to descriptive) reflection was achieved when students based their writing on interactions with critical friends. This, corroborated by students' perceptions, led Hatton and Smith to conclude that discussion with another person is a powerful strategy for fostering reflective action. Hatton and Smith infer that this occurs through processes of modelling and coaching (Pugach, 1990). Further evidence is provided by Francis (1995) who suggests, on the basis of extensive work with journal writing, that students perceive individual reflection to be enhanced by group and paired collaboration. Her interpretation is that articulating to others helps shape and clarify ideas. Data gathered by Ballantyne and Packer (1995b) indicate that students perceive one of the main weaknesses of journalling to be its essentially solitary nature. They conclude that this weakness may be overcome, and the reflective nature

of journaling enhanced, by sharing and discussing journal entries with peers or supervisors. Despite this strong 'circumstantial' evidence, the actual effects of supportive dialogue on the process and outcomes of reflective journal writing have not been systematically tested.

### Aims of the study

This study aims to gain a greater understanding of the process and outcomes of journal writing by examining the effects of variation in two of LaBoskey's (1993) four dimensions of reflection (namely, the content and context of reflection) on the focus and quality of journal entries produced by preservice teachers. These factors were factorially combined in an intervention study.

Content of reflection involves a comparison of two approaches, a cognitive approach in which students are encouraged, by instruction and feedback, to examine theory in the light of practice and to interpret practice from a theoretical perspective, and a narrative or experiential approach in which students are encouraged to focus on their own experience and to construct a personal understanding of professional practice<sup>2</sup>.

Context of reflection compares journaling supported by reflective dialogue with journaling as an essentially individual process. These two conditions are designed to allow the effects of the dialogue itself to be tested, while holding constant the influence of revision and

self-analysis of entries, factors which have been cited as encouraging reflection and stimulating learning (Cranton, 1994).

In summary, a number of issues which impact on the use and effectiveness of student journal writing during preservice teacher education are addressed in this study.

Students' journal entries, as they reflect on their developing teaching practice during field experience, are examined in order to:

- \* establish the range of levels of sophistication in reflective writing likely to occur amongst preservice teachers; and
- \* explore the impact of journalling on the development of reflective skills.

Variations in the content and context of reflective writing are introduced in order to:

- \* determine the extent to which the content of reflection can be influenced by instruction and feedback;
- \* examine the relative advantages and disadvantages of a cognitively-oriented and an experientially-oriented approach to journalling; and

\* investigate the impact of reflective dialogue on the focus, quality and development of reflection.

## Method

### Participants

Students of a one-year Graduate Diploma of Education (Secondary) course were invited to participate in the study. These students had already completed a degree in their discipline area and were undertaking the Graduate Diploma course to obtain a teaching qualification. Initially, forty students were enlisted and assigned randomly to each of the four intervention conditions (cognitive vs experiential x reflective dialogue vs self analysis). Five students dropped out of the programme for various reasons during the first few weeks, leaving a total of 35 participants (16 males and 19 females), assigned to each condition as reported in Table 1. Of the 35 participants, 23 submitted all 11 entries, 10 were missing one or two entries and 2 were missing three or four entries, yielding a total of 366 entries.

Table 1. Number of students in each of the four intervention conditions

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Students were given credit towards professional development requirements in return for their participation in the research.

## Procedure

Students in the Graduate Diploma of Education participate in field experience placements in two blocks during the year, for five weeks during Semester 1 and six weeks during Semester 2. Participants were asked to keep a weekly journal during the 11 weeks of their block placements. The practicum period was chosen as the key time for student reflection as student teachers universally report that the practice teaching experience is the most important and valuable aspect of their teacher education programme (Russell, 1993). In the present study, it was presumed that the practicum would bring both the integration of theory and practice (cognitive approach) and the development of personal experience (experiential approach) into focus.

In the week before the first practicum commenced, participants were given oral and written instruction in the objectives of journal writing and the type of approach they should adopt, according to the following conditions:

Participants in the cognitive journal condition were instructed to write journal entries which focussed on the application of course concepts to their practicum experience so as to help them interpret that experience, improve their teaching, and enhance their professional development. They were not precluded from drawing on other knowledge to assist their reflection, but their primary objective was to use theory to inform practice.

Participants in the experiential journal condition, on the other hand, were requested to focus on incidents of personal importance occurring during their practicum experience, describing and analysing each incident in terms of their own understandings, feelings and actions, and discussing the implications of the incident for their teaching practice and professional development. They were not precluded from referring to formal theory, but emphasis was placed on analysing and understanding their experiences and practices in their own terms.

Journal entries were submitted by fax on the Friday of each week and two researchers received these and provided, by return fax the following Monday, brief written feedback designed to assist students to maintain their assigned content condition.

For students in the reflective dialogue condition, each journal entry became the subject of a 15-minute dialogue between the student and the researcher, which took place in the week following the journal entry. During this dialogue, alternative perspectives were suggested and explored, and issues or consequences which might assist with the interpretation or improvement of practice were discussed. Students in the self-analysis condition were asked, instead of the dialogue, to write a brief commentary in which they reconsidered their journal entry, taking account of the feedback they had received and any further thoughts they may have had about their experience. In this way, both groups of students had equivalent opportunity to revisit the experiences and reflections of the previous week, the significant

variation being the presence or absence of a reflective partner. The four intervention conditions are summarised in Table 2.

Table 2. Summary of the four intervention conditions

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

On conclusion of the practicum, students were given a short questionnaire in which they were asked to briefly indicate their perceptions of the function of journalling, the difficulty of writing from the perspective of the particular content condition to which they had been assigned, the procedure they adopted in writing their journals, the helpfulness of the weekly written feedback and reflective dialogue or self-analysis, and the benefits and general difficulties they had experienced in journal writing. Students were interviewed on four occasions, before, between and after the practicum blocks, in order to track changes in their conceptions of 'learning', 'teaching' and 'learning to teach'. These data are to be reported elsewhere. In the final interview, students were also asked to discuss the value of journal writing to their professional learning. These results are reported below, together with the questionnaire data, as indices of students' perceptions of the effectiveness of journalling as a learning technique.

Two measures were included to assess the effects of journalling on professional learning (responses to teaching vignettes and end-of-year

reflective essays), but preliminary analysis indicated that neither was able to detect the subtle changes which journalling may have evoked in the context of the overwhelming impact of the practicum itself. Accordingly, this paper relies mostly on analyses of the journal entries themselves to provide evidence of the process and outcomes of journalling, supplemented, as already noted, with students' perceptions.

#### Data coding and analysis

A number of different approaches have been taken to the coding and analysis of journal entries, including schemes based on Van Manen's (1977) classification of the type of reflection engaged in, ranging from technical and practical issues of teaching to a critical examination of social/ethical issues (Sparks-Langer et al., 1990) and schemes designed to classify the sophistication of reflection engaged in, often based on an adaptation of Bloom's (1956) taxonomy and ranging from description to complex analysis and synthesis (Ballantyne and Packer, 1995b; Hettich, 1990; Surbeck, Han and Moyer, 1991; Wagenaar, 1984). Valli (1993) suggests that the former reflects a 'sociological' approach in which evidence of the expanding scope or content of enquiry is considered the most important indicator of reflectivity, while the latter reflects a more 'psychological' approach in which the complexity and sophistication of the writing is considered most important. LaBoskey (1993) suggests the way to resolve this tension is to treat the focus of reflection and the level of reflection as two different dimensions. In this way, she de-emphasises the hierarchical structure

of Van Manen's (1977) classification, which she claims devalues the practical and overlooks many of teaching's complex concerns in relation to instruction and curriculum. Tann (1993) also draws a distinction between focus and function.

A similar two-dimensional approach was adopted in the present study. Each journal entry was coded firstly according to the focus of reflection, i.e., the nature of the event, observation or issue being reported. Where an entry dealt with more than one focus area, it was divided into segments accordingly. (The majority of the 366 entries contained only one or two segments. Only 5 entries contained more than 4 segments.) The level of reflection within each segment, i.e., the extent to which the student had worked with the issue or observation and the level of analysis/reflection reached, was rated on a 5 point scale. Coding categories for both focus and level of reflection were based on those employed in previous research (Ballantyne and Packer, 1995b; Biggs, 1992; Biggs and Collis, 1982; Richert, 1992; Tann, 1993) and were refined in order to best represent the present data. These categories are described in Tables 3 (focus of reflection) and 4 (levels of reflection). All journal entries were coded by two researchers, one of whom attended predominantly to the coding of focus, while the other attended predominantly to the coding of level. Each of the two researchers then cross-checked the codes applied by the other. Discrepancies in coding were resolved by discussion, in some cases involving a third researcher.

Additional coding was performed on each journal entry by means of a checklist indicating whether the particular journal entry included:

- \* an expression of feelings
- \* a plan of action
- \* a reference to public theory (ie., theory referenced in the literature)
- \* a reference to the student's own personal theory of teaching, or
- \* a reference to the feedback from or reflective dialogue with the researcher.

Although each segment was coded separately, for both focus and level of reflection, aggregated data were used for the purpose of analysis in order to avoid dependency problems caused by multiple observations within subjects. For the measurement of focus, this consisted of the number of journal entries (0-11) in which each of the four major categories (Teaching, Self, Profession and Students/Class) occurred. For the measurement of level, two overall ratings were assigned to each journal entry: the characteristic level (level attained in the majority of segments) and the highest level reached within the entry. For the purpose of repeated measures analyses, journal entries were aggregated into four sets in order to overcome the problem of missing data. Entry 1 was considered a baseline measure of reflective ability and entered, where appropriate, as a covariate. Sets 1 and 2 consisted of 2 entries each, encompassing the remainder of the first 5-week practicum block. Sets 3 and 4 consisted of 3 entries each, encompassing the second 6-week block. Journal sets (1 to 4) were regarded as a repeated measure and the two independent variables (content and context) as

between-subjects variables. Analyses were performed using both the average characteristic level in the set and the highest level reached in the set as dependent variables.

Table 3. Categories describing focus of reflection

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Table 4. Five-point level of reflection scale

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

## Results and Discussion

The frequency of occurrence of each focus area is reported in Table 5 and each level of reflection in Table 6.

Table 5. Percent of occurrence of each focus area

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Table 6. Percent of occurrence of each level of reflection

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Segments focussing on Teaching or Self were not only more prevalent than those focussing on the Profession or Students, they also had a

higher level of reflection (one-way ANOVA  $F=7.97$ ,  $p<.001$ ; post-hoc comparisons indicating significant differences in level of reflection between Teaching segments and both Profession and Student/Class segments and between Self segments and Profession segments).

Analysis results are discussed below according to the five major aims of the study.

Establishing the range of levels of sophistication in writing likely to occur amongst preservice teachers

As anticipated in the literature, a wide range of individual differences in levels of sophistication was encountered in the present study. In their first entry, the majority of students (66%) reached no higher than level 3 (relating), 31% reached level 4 (reasoning) and only 1 student reached level 5 (reconstructing). Mature-aged students (aged 30 and over) generally reached higher levels of reflection in their first entry than younger students ( $F = 11.3$ ,  $p < .01$ , see Table 7). Of the eight mature-aged students in the sample, six (75%) reached level 4 (reasoning) or level 5 (reconstructing) in their first entry.

There were no significant differences in the level of reflection reached according to gender.

Table 7. Level of reflection reached in first journal entry by mature-aged and younger students

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Journal entries ranged in length from approximately 50 words to over 2000, with an average length of 400-500 words. In general, longer entries were more likely to reach the higher levels of reflection, although some level 5 entries were as short as 100 words, while some level 2 entries were up to 400 words in length. Some students spent as little as 15 minutes on each journal entry, while others spent up to 2 hours, the average being approximately 1 hour. Again, students writing at the higher levels generally spent more time (at least one hour) on their entries, although one student was able to reach level 5 with an estimated 15 minutes effort.

Students differed in their perceptions of the function of journalling, ranging from a simple record of events to a venue for constructing and reconstructing practice and self-identity. Between these extremes were those who saw it as a means for reflecting on and learning from experience, improving performance, grappling with issues, clarifying thinking and linking theory and practice. There were some indications that students who held a more sophisticated view of the function of journalling were more likely to reflect at higher levels.

Although the data are tentative at best, students' comments on the procedure they adopted in writing their journals suggest that those who took daily notes to which they then returned as a basis for reflection were more likely to reach higher levels of reflection than others. Students who reached the higher levels were more likely to cite

understanding and questioning as the benefits of journalling while those reflecting at lower levels were more likely to cite improving their teaching performance.

Exploring the impact of journalling on the development of reflective skills

As indicated in Table 8, many students were able to improve their journal writing over the course of the study until, by the end of the journal writing period, the majority had been able to reach level 4 or 5 at least once in their final entries. Repeated measures ANOVA revealed a significant within subject effect of journal set (excluding entry 1) on the highest level reached ( $F = 3.53, p < .05$ ), indicating a net improvement over time. However, the most dramatic improvement occurred immediately after the first entry.

Table 8. Percentages of students achieving higher levels of reflection in each of the four journal sets.

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Of the 23 students (66%) who were reflecting at level 2 or 3 in their first entry, 12 had moved up to level 4 or 5 on their last entry, while 11 remained at level 2 or 3. There were no differences between the group who improved and the group who did not in terms of the length of their entries, the time spent on entries, the age or gender of the students, or the intervention conditions to which they had been

assigned. Regression analysis indicated that the only significant predictors of performance on the final journal entry were the student's performance on the first journal entry (an indicator of initial reflective ability) and the average length of journal entries (an indicator of the student's willingness to devote effort to the task).

The perceptions of students who showed improvement during the journal writing period support the contention that journalling contributed to the development of their reflective skills, and that this, in turn, facilitated the improvement of teaching practice:

It allowed me to confront my own thoughts and confront my own practice ... I was sort of constructing myself as a teacher in the journalling process.

When you are caught up in the stress and hype of doing it, you really lose sight of what the purpose is and why. I think it's really crucial to look back at what you should be doing better and what you've been doing well. To know what you are doing is power, I think, to change.

It's helped me to understand what I'm doing and why I'm doing it ... It made me actually think about what I was doing and whether it was effective or not.

It should also be noted, however, that a significant number of students (11 out of 23 low reflectors) did not improve during the course of the

study.

Determining the extent to which the content of reflection can be influenced by instruction and feedback

Students in the cognitive content condition were instructed, both initially and through on-going feedback after each journal entry, to focus on the application of course concepts to their practicum experience and to interpret practice from a theoretical perspective whereas those in the experiential content condition were instructed to focus on the analysis and development of experience and to construct their own personal theory of professional practice. The extent to which participants were able to achieve this prescribed content was determined by comparing, within subjects, the number of journal entries in which public theory was invoked and the number of entries in which private theory was espoused. (These two measures were not mutually exclusive.) Repeated measures analysis of variance indicated a significant interaction effect between journal content condition and frequency of referral to public vs. private theory ( $F = 36.64$ ,  $p < .001$ , see Table 9). This finding confirms that students were indeed able to maintain the distinction in the content of their journal writing.

Table 9. Reference to public and private theory in the two content conditions

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Although students were able to conform, in their writing, to the

instructions they were given, their perceptions of the difficulty of so doing varied between conditions. Thus, when asked in the questionnaire "Did you feel you were able to understand and write according to the focus of your journal?", students in the cognitive condition gave a larger proportion of negative responses (47%) than those in the experiential condition (16%). In particular, their comments emphasised their limited knowledge of theory (being a one-year Graduate Diploma course), their lack of time for reading theory, and the difficulty of connecting theoretical learning and classroom practice, e.g.,

"I don't think I was fully equipped with a solid theory base."

"I felt that I couldn't read enough theories to back my observations and experience."

"Once at prac, I felt quite removed from my own learning at Uni. The two didn't seem connected."

"Instead of thinking back over the theories studied, I would just pick one from a list and think of something relevant on Prac."

By contrast, students in the experiential condition were more likely to report positively regarding the value and relevance of the approach they had been asked to take, e.g.,

"I found it provided a means to a new level of introspection regarding

my performance."

"Each entry reflected a topic derived from something that affected me."

Examining the relative advantages and disadvantages of a  
cognitively-oriented and an experientially-oriented approach to  
journaling

The differences between the cognitively-oriented and the  
experientially-oriented approaches are explored in terms of:

- \* the focus of reflection under each condition;
- \* the level of reflection achieved under each condition;
- \* improvement in reflection from initial to final entry under each condition; and  
students' perceptions of the value of journaling under each condition.

Focus of reflection

A repeated measures ANOVA was conducted using the number of journal  
entries in which Teaching, Self, Profession or Student/Class themes  
were addressed as the within subjects factor, and journal content  
condition as the between subjects factor. A significant interaction  
effect was found ( $F = 3.27$ ,  $p < .05$ ), indicating that students tended to  
focus on different themes when they were writing from a cognitive  
perspective as opposed to an experiential one (see Table 10). Students  
in the cognitive condition focussed more on issues or events relating  
to their teaching or to students in their class, while those in the  
experiential condition focussed more on themselves or on professional

issues of teaching. There were no overall differences between the cognitive and experiential groups in terms of the number of entries in which feelings were expressed. However, a significant interaction was detected when the effect of gender was taken into account. In the experiential condition, males and females were equally likely to express their feelings, whereas in the cognitive condition, only females expressed their feelings in the majority of entries ( $F = 4.94$ ,  $p < .05$ ). Students in the experiential condition were more likely to make plans for improving their performance than those in the cognitive condition, regardless of gender ( $F = 7.90$ ,  $p < .01$ ).

One explanation for these findings could be that students in the cognitive condition felt constrained to focus on the areas which had been covered in their university teaching, or which could more easily be linked to public theory. This is consistent both with students' comments about the relative difficulty of writing a cognitive journal and Richert's (1992) finding that, when there were no externally imposed guidelines to focus their reflections, students were more likely to respond in a personal way to factors in their teaching lives.

Table 10. Mean number of entries per student (max = 11) focussing on each theme, according to journal content condition.

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Level of reflection and improvement over time

There were no significant effects of journal content condition on either the characteristic level of reflection in journal entries or the highest level reached. Improvement in students' level of reflection over time occurred equally in both content conditions. This finding is important as it confirms that, even though the cognitive and experiential approaches have different sets of associated benefits and drawbacks, their overall effect on students' to write reflectively at a high level are equivalent.

#### Students' perceptions of the value of journalling

Only 20 of the 35 students were available for the final interview, where they were asked to report on the effects of journalling on both their professional learning and their own teaching practice. Eighteen of the 20 students reported that they had benefited from the experience. The two students who felt they had not benefited were from different journal content conditions. Overall, students journalling with a cognitive approach and those journalling with an experiential approach were equally positive about the benefits they had received. However, only those students in the cognitive journalling condition referred to development in their understanding of theory as an effect of journalling, e.g.,

"It has given me a better understanding of some of the theories related to teaching... (It helped me to) explore the basis behind the theories, not only what theories mean, but how they work, or why they don't work in some circumstances."

Students in the experiential journalling condition were more likely to refer to development in their self-understanding, although this was not exclusive to this condition, e.g.,

"When you are writing ... all of a sudden you ask yourself, 'why am I doing this?' and you seem to go off on a different tangent. Half way through writing you think, 'I didn't know I felt that way' or 'Wow, I didn't realise that about myself'. You find out new things about yourself."

Students in the cognitive journalling condition were more likely to express frustration about their task than those in the experiential condition. They were more likely to complain about the time taken in journal writing and the difficulty of writing from a cognitive perspective. There was no significant difference, however, in the actual writing times reported by the two groups.

Investigating the impact of the provision of reflective dialogue on the focus, quality and development of reflection

The impact of the provision of reflective dialogue, as opposed to opportunity for self-analysis, is explored in terms of:

- \* the focus of reflection;
- \* the level of reflection achieved;
- \* improvement in reflection from initial to final entry; and

\* students' perceptions of the value of the different context conditions.

#### Focus of reflection

Repeated measures ANOVA indicated that the provision of reflective dialogue had no impact on the number of entries in which Teaching, Self, Profession or Student/Class themes were addressed. There were no significant differences between the reflective dialogue and self-analysis groups in terms of the number of entries in which feelings were expressed or in which plans were made for improving performance. These results are inconsistent with Richert's (1992) finding that reflection with a partner resulted in less personal and more teaching-orientated reflections. However, the present study was different from Richert's, in that the dialogue occurred after the journal entry had been written, whereas in her study coding was based on reflective interviews (in the dialogue conditions).

#### Level of reflection and improvement over time

The provision of reflective dialogue had no significant effect on students' overall level of reflection. There was, however, a differential effect according to the topic of reflection (interaction effect:  $F = 4.36$ ,  $p < .05$ ; see Table 11). When their reflection was focussed on their students or class, students in the self-analysis condition reached a higher level of reflection than those in the

reflective dialogue condition.

Table 11. Mean reflective level of entries (max = 5) focussing on each theme, according to journal context condition.

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

Similarly, although students in the two context conditions improved equally over the course of the 11 entries, students in the self-analysis condition improved more quickly than those participating in reflective dialogue. Thus while both groups had fewer than 40% of students achieving level 4 or 5 reflection in their first entry, the self-analysis group had increased to over 60% in entries 2-5, while the majority of students in the reflective dialogue group did not achieve this until entries 9-11 (see Table 12).

Table 12. Percentages of students in each journal context condition achieving higher levels of reflection in each of the four journal sets.

Please refer to the formatted paper at URL:

<http://www.meu.unimelb.edu.au/staffwebsites/dkennedy/AARE/Bain167.html>

These findings introduce some doubt to the commonly-held belief that journaling can be improved as a reflective process by the provision of supportive dialogue (Ballantyne and Packer, 1995b; Francis, 1995; Hatton and Smith, 1995). Further investigation is needed in this regard, because if it can be demonstrated that students can support

their own reflective processes through self-analysis with minimal staff feedback, the cost of journal writing as a technique will be significantly reduced. In particular, if increasing students' ability to reflect is considered a valid goal, it is possible that self-analysis may be more effective than dialogue in achieving it.

#### Students' perceptions of the value of dialogue

Both the reflective dialogue and the self-analysis groups were able to report some benefits from their respective strategies. Students in the reflective dialogue condition generally appreciated being able to talk to someone outside their immediate situation and found that the researcher's questions enabled them to look at their experiences from a different perspective, e.g.,

"It's having someone different to talk to about your problems or your good ideas ... another person who could look at it from a different perspective, someone who's away from your school."

"It was good to have Sharon come and question further, to put things in perspective and get you to interpret what's going on."

"Having to justify my conclusion to a third party cemented my own understanding of those conclusions."

Students in the self-analysis condition reported that the revision exercise had enabled them to rethink their initial reactions and take a

broader view of events, e.g.,

"That sort of reflection, looking at it again, I think is really good, because when you do that after a period of time, that really makes you think about it for a second time, or a third time ... when you look back in your journal there are certain things that keep coming up, obviously they are important to you."

"By struggling with my own feelings about issues, I often saw the overall situation in a new light, giving me a more powerful tool for effective communication."

"Looking back at the way I was feeling and the reasons why helped me to reach an objective outcome."

Despite the perceived value of self-analysis, the need for journalling to go beyond an individual endeavour was confirmed by the responses of students in this condition with regard to the feedback they had received. When asked to comment on the value of the weekly written feedback, students' responses indicated that, in many cases, written feedback was able to fulfil a similar role to that of verbal dialogue, e.g.,

"It made you think more about what you had written and you were able to look at it in a different way."

"I received feedback that asked me questions that let me think in more depth and helped me to reflect."

"I found it hard to reflect at the beginning, but when she spurred me by saying 'Why?' and 'How?' I can understand."

"It asked questions about certain aspects of my learning experiences that I had not previously considered. The feedback made me think more about my learning experiences."

"The feedback was good when I had to give self-dialogue - it started off the objective aspect for me."

These comments confirm that the provision of brief written feedback, especially when it involves constructive questioning of the student's thinking, may be a sufficient stimulus to deepen the reflective process. In this context, encouraging students to re-visit their journal entries, armed with some new insights and perspectives provided by feedback, may be a more helpful exercise in terms of improving reflective writing than continuing an oral reflective discussion, which in many ways is divorced from the journal entry itself. This interpretation is supported by the finding that students in the self-analysis condition, more often than those in the dialogue condition, tended to integrate their responses to feedback into subsequent journal entries ( $t = 1.89, p = .07$ ) thus raising the level

of analysis and reflection attained in their journal writing.

Further analysis of students' responses to different types of feedback will be reported elsewhere and is the subject of ongoing research by the authors.

### Conclusion

This study has attempted to shed some light on the process and outcomes of journal writing under various conditions, in the hope of optimising the effectiveness of this tool in enhancing students' reflective writing. The study has confirmed that students come to the journal writing task with a wide range of reflective skills and attitudes.

Some, especially more mature students, are able to engage in sophisticated reasoning and analysis of events and issues with very little assistance, while others struggle to progress beyond the level of description and simple response.

LaBoskey (1993) suggests that students' initial reflective abilities and orientations have a significant impact on how they participate in reflective activities and what they take away from them. This is supported by findings in the present study that, although improvement over time can be accomplished, initial reflective ability and willingness to devote effort to the task are the best predictors of final performance. The challenge which faces journal users is to devise means by which those with weaker reflective skills may be helped to improve (Russell, 1993).

The provision of constructive feedback, which challenges students' naive assertions and helps them discover alternative perspectives, appears to be a major contributor to the encouragement of growth in reflective writing. Paterson (1995) includes the quantity and quality of feedback as one of four factors which are seen to impact upon an individual's willingness and ability to reflect, the others being the individual's developmental level of reflection; the individual's perception of the trustworthiness of the teacher; and the clarity and nature of expectations associated with the journal writing assignment. Attention to the nature of the feedback provided, students' responses to it, and the extent to which it is integrated into subsequent writing should inform the development of journaling contexts and structural aids designed to assist those students who have the most difficulty with reflective thinking and writing.

The commonly-held belief that the opportunity to share reflections with a partner is a necessary factor in encouraging a high level of reflection in journal writing is not supported by the findings of this study. Students appreciate the opportunity for dialogue and perceive it to be a valuable contributor to their learning, but there is no evidence in the present data that it does, in fact, have any measurable effect. This discrepancy reinforces the need to seek evidence of student learning which goes beyond self-report. Although the results of this study indicate that the provision of reflective dialogue contributes little to the enhancement of reflective writing, it is

quite possible that evidence of its effects may be found in some other measure. It should also be noted that many students, both in the reflective dialogue and the self-analysis conditions, reported having discussed their teaching with others such as supervising teachers and fellow students and thus in reality, none of the students was journaling in isolation. The present findings in relation to the value of reflective dialogue should therefore be interpreted with caution. They do, however, provide some encouragement for journal users that significant benefits can be achieved without the intensive involvement of a reflective supervisor.

Finally, this study demonstrates that the content of students' journal writing can be manipulated by instruction and feedback and that different outcomes may be achieved by so doing. Tann (1993) reported that students rarely link personal experience with the public domain of texts. In the present study, however, students in the cognitive condition were able to achieve this with some degree of success. Such reflection did not come naturally to students, however. They appeared to be more constrained in their focus than their experiential counterparts and reported more difficulty and frustration with their task, but many found the experience very helpful in developing their understanding of theory. In contrast, students in the experiential condition appreciated the freedom to reflect on issues of personal significance and rarely incorporated theory in their reflection. They were more likely to report a growth in self-understanding rather than theoretical understanding. It is important to note that, although the

content of their reflection, and consequent learning, varied in accordance with the approach adopted, the two approaches gave students similar opportunities to develop their reflective skills. It is concluded that journal content may be deliberately varied in order to achieve different learning outcomes, without detracting from the value of the technique as a reflective tool.

### Acknowledgments

The contribution of Ms. Sharon Bennett to the research is gratefully acknowledged.

## References

Ballantyne, R. and Packer, J. (1995a). Making connections: Using student journals as a teaching/learning aid. HERDSA Gold Guide No. 2, HERDSA, Canberra.

Ballantyne, R. & Packer, J. (1995b). The role of student journals in facilitating reflection at doctoral level. *Studies in Continuing Education*, 17 (1&2), 29-45.

Bengtsson, J. (1995) What is reflection? On reflection in the teaching profession and teacher education. *Teachers and Teaching: Theory and Practice*, 1, 23-32.

Biggs, J.B. (1992). A qualitative approach to grading students. *HERDSA News*, 14: 3-6.

Biggs, J.B. & Collis, K.F. (1982). *Evaluating the quality of learning: The SOLO taxonomy*. New York: Academic Press.

Bloom, B.S. (Ed.) (1956). *Taxonomy of educational objectives: The classification of educational goals, Handbook I Cognitive Domain*. New York: Longmans Green.

Bolin, F.S. (1988). Helping student teachers think about teaching. *Journal of Teacher Education*, March-April, 48-54.

Calderhead, J. (Ed.) (1988). *Teachers' Professional Learning*.

Philadelphia: The Falmer Press.

Calderhead, J. and Gates, P. (1993) Introduction. In J. Calderhead & P. Gates (Eds.) *Conceptualizing reflection in teacher development* (pp. 1-10). London: The Falmer Press.

Cranton, P. (1994). *Understanding and promoting transformative learning*. San Francisco: Jossey-Bass.

Dewey, J. (1910). *How we think*, Boston: D.C. Heath and Co., Publishers.

Eldridge, W. D. (1983). The use of personal logs to assist clinical students in understanding and integrating theories of counselling intervention. *Instructional Science*, 12, 279-283.

Francis, D. (1995). The reflective journal: A window to preservice teachers' practical knowledge. *Teaching and Teacher Education*, 11 (3), 229-241.

Hatton, N. & Smith, D. (1995). Reflection in teacher education: towards definition and implementation. *Teaching and Teacher Education*, 11 (1), 33-49.

Hettich, P. (1990). Journal writing: Old fare or nouvelle cuisine? *Teaching of Psychology*, 17, 36-39.

Holly, M. L. H. (1984). Keeping a personal-professional journal.

Geelong: Deakin University.

Knowles, J.G. (1993). Life-history accounts as mirrors: A practical avenue for the conceptualization of reflection in teacher education. In J. Calderhead & P. Gates (Eds.) Conceptualizing reflection in teacher development (pp. 70-92). London: The Falmer Press.

LaBoskey, V.K. (1993). A conceptual framework for reflection in preservice teacher education. In J. Calderhead & P. Gates (Eds.) Conceptualizing reflection in teacher development (pp. 23-38). London: The Falmer Press.

Landeen, J., Byrne, C. & Brown, B. (1992). Journal keeping as an educational strategy in teaching psychiatric nursing. *Journal of Advanced Nursing*, 17, 347-355.

Leary, M. (1981). Working with biography. In T. Boydell & M. Pedler (Eds) *Management self-development: Concepts and practices*. Aldershot: Gower.

McIntyre, D. (1993). Theory, theorizing and reflection in initial teacher education. In J. Calderhead & P. Gates (Eds.) *Conceptualizing*

reflection in teacher development (pp. 39-52). London: The Falmer Press.

Paterson, B.L. (1995). Developing and maintaining reflection in clinical journals. *Nurse Education Today*, 15, 211-220.

Pugach, M. (1990). Self-study: The genesis of reflection in novice teachers. Paper presented at the annual meeting of the American Educational Research Association, Boston, April 1990.

Richert, A.E. (1992). The content of student teachers' reflections within different structures for facilitating the reflective process. In T. Russell and H. Munby (Eds.) *Teachers and Teaching: From Classroom to Reflection* (pp. 171-191). London: The Falmer Press.

Russell, T. (1993). Critical attributes of a reflective teacher: Is agreement possible? In J. Calderhead and P. Gates (Eds.) *Conceptualizing reflection in teacher development*. (pp. 144-153). London: The Falmer Press.

Sparks-Langer, G. M. (1992). In the eye of the beholder: Cognitive, critical, and narrative approaches to teacher reflection. In L. Valli (Ed.), *Reflective teacher education: Cases and critiques* (pp. 147-160). Albany, NY: State University of New York Press.

Sparks-Langer, G. M., Simmons, J., Pasch, M., Colton, A. & Starko, A.

(1990). Reflective pedagogical thinking: How can we promote it and measure it? *Journal of Teacher Education*, 41, 23-32.

Surbeck, E., Han, E.P. & Moyer, J.E. (1991). Assessing reflective responses in journals. *Educational Leadership*, March: 25-27.

Tann, S. (1993). Eliciting student teachers' personal theories. In J. Calderhead and P. Gates (Eds.) *Conceptualizing reflection in teacher development* (pp. 53-69). London: The Falmer Press.

Thornbury, S. (1991). Watching the whites of their eyes: The use of teaching-practice logs. *ELT Journal*, 45/2, 140-146.

Valli, L.R. (1993). Reflective teacher education programs: An analysis of case studies. In J. Calderhead and P. Gates (Eds.) *Conceptualizing reflection in teacher development*. (pp. 11-22). London: The Falmer Press.

Van Manen, M. (1977). Linking ways of knowing with ways of being practical. *Curriculum Inquiry*, 6 (3): 205-228.

Wagenaar, T. C. (1984). Using student journals in sociology courses. *Teaching Sociology*, 11, 419-437.

Walker, D. (1985). Writing and reflection. In D. Boud, R. Keogh and D. Walker (Eds.), *Reflection: Turning experience into learning*.

London: Kogan Page.

Wodlinger, M. G. (1990). April: A case study in the use of guided reflection. *The Alberta Journal of Educational Research*, 36, 115-132.

Yinger, R. J. & Clark, C. M. (1981). *Reflective journal writing: Theory and practice*. Occasional Paper No. 50. The Institute for Research on Teaching, Michigan State University, Michigan.

Zeichner, K. M. (1992). Conceptions of reflective teaching in contemporary US teacher education program reforms. In L. Valli (Ed.), *Reflective teacher education* (pp 161-173). Albany, NY: State University of New York Press.

1 For the sake of clarity, the term 'focus' will be used to refer to the particular topics reported during reflection, while the term 'content' is reserved for the distinction between cognitively- and experientially-oriented approaches.

2 A critical approach, in which students are encouraged to reflect on the social and ethical implications of the teaching situations they encounter, was not included in this study due to the reported difficulty of eliciting this type of reflection among preservice teachers (Hatton and Smith, 1995; Sparks-Langer, et al., 1990).